UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,586	04/16/2004	David L. Gothard	0004.000008US	1757

33422 7590 02/23/2010

GOODMAN, ALLEN & FILETTI PLLC
4501 HIGHWOODS PARKWAY
SUITE 210
GLEN ALLEN, VA 23060

EXAMINER	
DUONG, THOI V	

ART UNIT	PAPER NUMBER
2871	

MAIL DATE	DELIVERY MODE
02/23/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/826,586	GOTHARD, DAVID L.	
	Examiner	Art Unit	
	THOI V. DUONG	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-27 and 29-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-27 and 29-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the Amendment filed November 19, 2009.

Accordingly, claims 16-27 and 29-37 were amended, claims 1-15 and 28 were cancelled, and new claims 38-44 were added. Currently, claims 16-27 and 29-44 are pending in this application.

Response to Arguments

2. Applicant's arguments with respect to claims 16 and 30 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 16-19 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Pelka (US 6,007,209).

Re claim 16, as shown in Figs. 3 and 4, Pelka discloses an illumination apparatus for displays to provide such displays with high intensity backlighting lights and providing a uniform display comprising:

a first panel 14 (housing) comprising a grid containing a plurality of high intensity light sources 12, 13 and a reflective background 15, 16 (col. 3, lines 31-35; and col. 3, line 59 through col. 4, line 8);

a diffuser panel 20 placed in front of said first panel 14 (col. 3, line 35-44); and

a display panel 26 placed in front of said diffuser panel 20 and being illuminated by the light from the diffuser panel 20 to thereby provide an illuminated display (col. 2, lines 28-30 and col. 3, lines 44-48).

Pelka discloses that the diffuser 20 acts to diffuse the light from the light sources for enhancing light quality and removes residual nonuniformities such as cosmetic imperfections in the interior surfaces 16 (col. 2, lines 23-30 and col. 6, lines 5-13). Accordingly, it is clear that the diffuser panel is used to soften light from the light sources and provide a uniform appearance.

Re claim 17, the plurality of high intensity light sources 12, 13 on the first panel 14 are LED lamps (col. 3, lines 31-35).

Re claims 18 and 19, as shown in Fig. 1, a cover 7 is placed in front of said display panel 26 for protection of the display.

Re claim 38, the display panel 16 is an LCD display panel (col. 3, lines 22-24).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 30, 31 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelka (US 6,007,209).

Re claim 30, as shown in Figs. 3 and 4, Pelka discloses an illumination apparatus for displays to provide such displays with high intensity backlighting lights and providing a uniform display comprising:

a first panel 14 comprising a grid comprising a plurality of rows and columns each containing a plurality of high intensity LED lamps 12, 13 and a reflective background 15, 16 (col. 3, lines 31-35; and col. 3, line 59 through col. 4, line 8);

a diffuser panel 20 placed in front of said first panel 14 (col. 3, line 35-44); and

a display panel 26 placed in front of said diffuser panel 20 and being illuminated by the light from the diffuser panel to thereby provide an illuminated display (col. 2, lines 28-30 and col. 3, lines 44-48).

Pelka discloses that the diffuser 20 acts to diffuse the light from the light sources for enhancing light quality and removes residual nonuniformities such as cosmetic imperfections in the interior surfaces 16 (col. 2, lines 23-30 and col. 6, lines 5-13). Accordingly, it is obvious that the diffuser panel is used to soften light from the light sources and provide a uniform appearance.

Pelka also discloses that the illumination apparatus is applicable to flat panel displays (col. 1, lines 3-10 and col. 7, lines 59-63). According to an intended application, it is well known in the art that the flat display panel can be a television display panel.

Re claim 31, as shown in Fig. 1, a cover 7 is placed in front of said display panel 26 for protection of the display.

Re claim 40, the display panel 16 is an LCD display panel (col. 3, lines 22-24).

7. Claims 22-27 and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelka (US 6,007,209) in view of Shimada et al. (Shimada, US 6,020,867).

Re claims 22-27 and 33-36, Pelka does not disclose that said diffuser panel is made of polycarbonate or glass.

As shown in Figs. 89 and 90, Shimada discloses that the diffuser panel 239 disposed in front of the backlight unit 530 may be formed of a transparent member such as polycarbonate or glass in order to provide a large area planar distribution showing a high luminance and a good viewing angle characteristic (col. 37, line 52 through col. 38, line 5; and col. 38, lines 29-32).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the illumination apparatus for displays of Pelka by employing a diffuser formed of polycarbonate or glass as taught by Shimada in order to realize a high luminance and a good viewing angle characteristic for the display (col. 38, lines 29-32).

8. Claims 20, 21 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelka (US 6,007,209) in view of Shimada et al. (Shimada, US 6,020,867) and Holmes (US 4,243,719).

Pelka does not disclose that said cover is made of clear polycarbonate glass as recited in claims 20, 21 and 32.

At first, as shown in Fig. 148, Shimada discloses a LCD apparatus comprising a backlight unit 530, a diffuser panel 239 (diffusion plate), a LCD panel P, and a cover

242 (face plate) placed in front of the LCD panel P to protect the LCD panel P, wherein the cover 242 is made of a reinforced glass (col. 11, lines 4-11; col. 19, lines 13-17; and col. 61, line 59 through col. 62, line 20).

Further, as shown in Fig. 4, Holmes discloses a process for forming a reinforced glass laminate comprised polycarbonate (clear polycarbonate glass), which is useful as an impact and scratch resistant display screen for a display using LEDs (col. 14, lines 14- 31).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the illumination apparatus for displays of Pelka with the teachings of Shimada and Holmes by having a cover made of clear polycarbonate glass in order to obtain an excellent transparency and impact resistance as well as a good resistance to surface damage by external agents (Holmes, col. 1, lines 4-9 and col. 14, lines 25-31).

9. Claims 29, 37, 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelka (US 6,007,209) in view of Boyd et al. (Boyd, US 6,663,262 B2).

Re claim 42, as shown in Figs. 3 and 4, Pelka discloses an illumination apparatus for display screens to provide such display screens with high intensity backlighting lights comprising:

a first panel 14 comprising a grid comprising a plurality of rows and columns each containing a plurality of high intensity LED lamps 12, 13 and a reflective background 15, 16 (col. 3, lines 31-35; and col. 3, line 59 through col. 4, line 8);

a diffuser panel 20 placed in front of said first panel 14 (col. 3, line 35-44); and

a display screen 26 placed in front of said diffuser panel 20 and being illuminated by the light from the diffuser panel to thereby provide a uniform picture on the display screen 26 (col. 2, lines 23-43 and col. 3, lines 44-48).

However, Pelka does not disclose a Fresnel lens panel placed in front of the first panel and covering the high intensity LED lamps, and the diffuser panel placed in front of said Fresnel lens panel and softening the high intensity light directed through the Fresnel lens panel.

As shown in Figs. 1 and 4 (see also Fig. 9), Boyd discloses an LCD display 10 comprising LED light source 16 and a Fresnel lens panel 46 placed in front of the first panel 20 and covering the first panel 20, and a diffuser panel 50 placed in front of said Fresnel lens panel 46 (col. 2, lines 29-31; col. 5, lines 46-53; and col. 6, lines 21-40).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the illumination apparatus for displays of Pelka with the teaching of Boyd by having a Fresnel lens panel placed in front of the first panel and the diffuser panel placed in front of said Fresnel lens panel so as to provide an efficient and effective assembly for distributing light from the LED light source to illuminate the display panel (col. 9, lines 31-34).

With the modification, it is obvious that the Fresnel lens panel covers the high intensity lamps 13 located within the first panel 14 as shown in Fig. 3 of Pelka. See also Fig. 9 of Boyd where the conditioner 26 comprising the Fresnel lens panel and the diffuser panel covers the LED light source 14C.

Boyd also discloses that the diffuser panel 50 can improve spatial uniformity of light and filter undesired wavelengths of light (col. 6, lines 21-24). Accordingly, it is obvious that the diffuser panel placed in front of said Fresnel lens panel softens the high intensity light directed through the Fresnel lens panel in order to improve spatial uniformity of light.

Re claim 43, Pelka discloses that the display screen 26 is an LCD panel (col. 3, lines 22-24).

Re claims 29 and 37, as shown Figs. 1 and 4, Boyd discloses a Fresnel lens 46 placed between the first panel 20 and the diffuser panel 50.

10. Claims 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelka (US 6,007,209) in view of Abileah et al. (Abileah, US 7,280,102 B2).

Pelka discloses that the illumination apparatus is applicable to flat panel displays (col. 7, lines 59-63). However, Pelka does not specifically suggest that the display panel is an organic display panel.

As shown in Fig. 1, Abileah discloses a display device comprising an illumination apparatus 52 with LEDs, a diffuser 56 and a display panel 54, wherein the display panel can be liquid crystal display, plasma display, organic display, EL display, etc… (col. 3, lines 18-27 and col. 4, lines 30-43).

Thus, according to an intended application, it would have been obvious to one having ordinary skill in the art that the display panel can be a liquid crystal display panel or an organic display panel.

11. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pelka (US 6,007,209) in view of Boyd et al. (Boyd, US 6,663,262 B2) as applied to claims 29, 37, 42 and 43 above, and further in view of Abileah et al. (Abileah, US 7,280,102 B2).

Pelka discloses that the illumination apparatus is applicable to flat panel displays (col. 7, lines 59-63). However, Pelka as modified in view of Boyd does not specifically suggest that the display panel is an organic display panel.

As shown in Fig. 1, Abileah discloses a display device comprising an illumination apparatus 52 with LEDs, a diffuser 56 and a display panel 54, wherein the display panel can be one of liquid crystal display, plasma display, organic display, EL display, etc… (col. 3, lines 18-27 and col. 4, lines 30-43).

Thus, according to an intended application, it would have been obvious to one having ordinary skill in the art that the display panel can be a liquid crystal display panel or an organic display panel.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms, can be reached at (571) 272-1787.

/Thoi V. Duong/ - Primary Examiner

February 19, 2010